

REMARKS

In view of the following remarks and above amendments, reconsideration of the rejections and further examination are requested. Upon entry of this amendment, claim 5 is added. Thus, claims 1, 2, 4 and 5 are pending with claim 1 being independent. No new matter has been added.

Rejections Under 35 U.S.C. §103(a)

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohki (U.S. 2003/0123769) in view of Okita et al. (U.S. 5,672,014).

Applicants respectfully traverse this rejection, and submit that the cited prior art fails to disclose or render obvious each of the elements of independent claim 1. Claim 1 recites, among other things, a bearing including an inner ring, an outer ring, and a plurality of rolling elements, wherein at least one member of the inner ring, the outer ring, and the rolling elements is formed from steel alloyed with Ti being present up to 0.003% by weight, and the member having a nitrogen-enriched layer formed thereon, the nitrogen-enriched layer having a nitrogen content of 0.1% to 0.7%.

The present invention, as recited in claim 1, is a combination of a fine microstructure technique and a nitrogen-enriched layer. *See* paragraphs 0023, 0088 and 0096 of the present application.

Applicants submit that the cited prior art fails to disclose or render obvious such a bearing. In particular, Ohki discloses a heat treated bearing formed from steel, which includes some of the same materials (although in different quantities) as recited in claim 1. However, as recognized by the Examiner, Ohki fails to disclose a nitrogen-enriched layer having a nitrogen content of 0.1% to 0.7%. The Examiner suggests that the carbonitriding process taught by Ohki (Fig. 2) appears to be identical or substantially identical to that disclosed in the instant specification. *See* the March 24, 2009 Office Action Pg. 7.

Applicants respectfully disagree. Figure 2 in Ohki and the figures of this application merely show heat treatment patterns. Applicants contend that, even assuming that Ohki discloses an identical or a substantially identical heat treatment pattern, such a disclosure would not necessarily result in the same nitrogen content. To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described

in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). MPEP §2163.07. Evidence that a substantially identical heat treatment pattern may not result in the same nitrogen content is illustrated in paragraph [0090] of the present specification, which states that "Comparative Example 3 corresponds to a sample that was treated by the same process as in Example of the present invention except that it contains higher level of nitrogen." Thus, nitrogen content of the steel being carbonitrided depends upon the concentration of NH₃ before decomposition in the furnace.

Applicants therefore submit that it is not inherent that the nitrogen-enriched layer of Ohki would have a nitrogen content of 0.1% to 0.7%, since there are other factors (as noted above) that effect nitrogen content. If the Examiner continues to contend that a specific nitrogen content necessarily results from all identical or substantially identical heat treatment patterns, Applicants respectfully request evidence of such.

Additionally, since rejections on obviousness grounds cannot be sustained by mere conclusory statements, i.e., there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, Applicants submit that Ohki fails to disclose or render obvious the nitrogen-enriched layer recited in claim 1. *See KSR International Co. v. Teleflex Inc.* 550 U.S. 398; 127 S. Ct. 1727 (2007).

Applicants submit that Okita fails to overcome the deficiencies of Ohki. Moreover, Okita does not disclose the recited nitrogen content in combination with a fine microstructure. That is, Okita proposes to adopt a special chemical composition for steel (*see*, for example, col. 4, lines 6 to 11), whereas Ohki proposes a fine microstructure of austenite grain in a JIS standard steel, SUJ2 (*see* paragraphs 0064 and 0106), without resorting to costly alloying (*see* paragraph 0006 of Ohki). Thus, Applicants submit that one of ordinary skill in the art would not have combined Ohki and Okita to arrive at the present invention.

Therefore, Applicants submit that claim 1 and its dependent claims 2, 4 and 5 are allowable over the cited prior art.

Conclusion

In view of the foregoing amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be allowed, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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2009.09.24 14:22:08 -04'00'

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September 24, 2009